Remote Sensing Applications Division (RSAD)

CDR Program Office

Weekly Report for Nov 16, 2012
Ed Kearns, Acting Chief

IOC Transition Status – Nov 16, 2012

| CDR	Assessment		Deliver Drafts							Review and Provide Feedback							Deliver Final Versions							Misc		Archive			Release		
	Assemble IPT	Perform Assessment	Deliver documented source code sample	Deliver README Draft	Deliver Flow Diagram Draft	Deliver C-ATBD Draft	Deliver Maturity Matrix Draft	Deliver Sample netCDF dataset	Deliver SA Draft	Provide feedback on source code sample	Provide feedback on README Draft	Provide feedback on Flow Diagram Draft	Provide feedback on C-ATBD Draft	Provide feedback on Maturity Matrix Draft	Provide feedback on Sample netCDF dataset	Provide feedback on SA Draft	Deliver final source code	Deliver final README	Deliver final Flow Diagram	Deliver final C-ATBD	Deliver final Maturity Matrix	Deliver final netCDF dataset	Deliver final SA	Create Collection Level Metatdata	Conduct Security Review	Archive Code Package	Put Docs in Library	Archive Data Package	Put dataset on THREDDS access server	Put data, docs, and code on web page	Conduct ORR
1 UAT_4Layer_MW_RSS	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	11-Nov	20-Nov	x	x	28-Nov	28-Nov	20-Nov	30-Nov	27-Nov	30-Nov	29-Nov	30-Nov	7-Dec	10-Dec	17-Dec
2 Vegetation Bundle	x																														
3 Cryosphere Bundle	x																														
4 Solar Irradiance Bundle	x																														
5 PERSIANN precipitation	x																														
6 Atmos Temp Bundle (MSU/AMSU/SSU)	x																														
7 Ocean Surface Bundle	x																														
8 Cloud/ Moisture Bundle	x																														
9 OISST	x																														
10 MSU/AMSU Temp Suite	x																														
11 ISCCP	x																														
12 MW Imager SSM/I(S)	x																														

Specific Risks:

1) Source code documentation is slow, expect delivery by 11/20
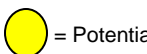
Items of interest:

- Initial Assessments in progress (plan to have 6 done by 12/1)
   - about half the PIs sent items for assessment, the other half haven't created the data, code, and/or docs yet.
   - will probably need to schedule the assessments and just report on what was received.

PREDECISIONAL DRAFT INFORMATION
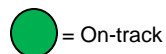
= On-track = Potential management action required = Management attention required

Other CDR Discussion Items

- **Process change to CDR documentation**
  - **Now that there is a CDR Program Library and all the CDR documentation (MM, Flow Diagram, C-ATBD) receives a document control number and they are maintained in the Library under Configuration Management, there is a duplication of effort to put it in the archive.**
  - **The CDR requirement is to provide the documentation to the public for transparency, which the DSR form has a block to indicate if a document is to be loaded on the CDR web page.**
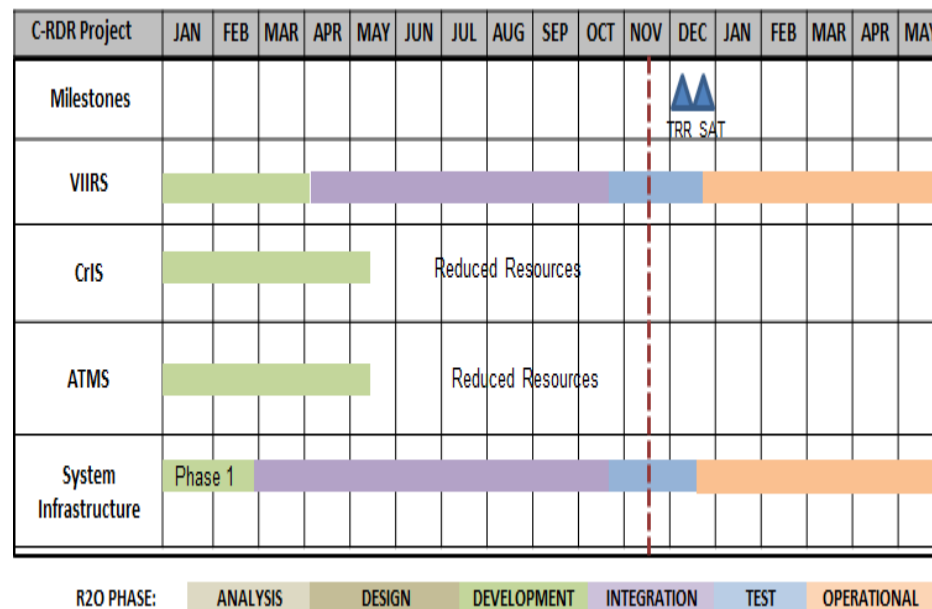 - **This will also shorten the SA and IOC process; and greatly reduce the document update process.**

SCHEDULE OF DELIVERABLES - CDRP 2012 O&M Contracts and Grants

ITE	DESCRIPTION	DUE DATE	Item Received	Approved	IP/License
NOAA/STAR - PI: A. Heidinger - $50,000 - Period of Performance: 7/01/2012 - 6/30/2013					**N/A**
1	Implementation plan	DUE 08/01/2012	√		8/16/2012
2	Daily updates	Within 7 days of the observation date	(red)		**Not delivering**
3	CDR quality assurance software tools	Initial delivery 09/01/2012	(red)		
UM (CICS-NC) - PI: B. Evans - $60,090 (issued 8/23/12) - Period of Performance: 7/01/2012 - 6/30/2013					**NO**
1	Implementation plan	DUE 9/23/2012	√	Pending	9/12/2012
	Main Update	January 2011 until the last update period prior to the demise of NOAA-18 AVHRR (approximately mid-2011)	(red)		
2	Monthly updates	10th day of the succeeding month	(red)		
3	CDR quality assurance software tools	Initial delivery 10/23/2012	?		
Rutgers - PI: D. Robinson - $50,000 - Period of Performance: 9/11/2012 - 9/10/2013					**YES**
1	Implementation plan	DUE 10/11/2012	√	Pending	10/11/2012
2	Monthly updates	5th day of the succeeding month	√	Archive	
3	CDR quality assurance software tools	Initial delivery 11/10/2012	(red)		
UAH - PI: J.Christy - $40,112 - Period of Performance: 9/15/2012 - 9/14/2013					**YES**
1	Implementation plan	DUE 10/15/2012	√	Pending	
2	CDR superseding Version 5.4	To be coordinated between Contractor and CDRP			
3	Monthly updates	8th day of the succeeding month	(red)		**Delivering to CMB**
4	CDR quality assurance software tools	Initial delivery 12/15/2012			

(green)	RECEIVED
(yellow)	DEADLINE APPROACHING
(red)	OVER DUE

SCHEDULE OF DELIVERABLES - CDRP 2012 O&M Contracts and Grants

			Item Received	Approved	IP/License
UCAR - PI: B. Ho - $50,000 - Period of Performance: 9/17/2012 - 9/16/2013					**YES**
ITE	DESCRIPTION	DUE DATE			
1	Implementation plan	DUE 10/17/2012	√	Pending	11/5/2012
2	CDR that includes AMSU Channels 7 & 9	To be coordinated between contractor and CDRP			
3	Quarterly updates	10th day of the month following the end of each Quarter			
4	CDR quality assurance software tool(s)	Initial delivery (12/17/2012)			
RSS (CICS-NC) - PI: C. Mears - Period of Performance: 9/15/2012 - 9/14/2013					**YES**
ITE	DESCRIPTION	DUE DATE			
1	Implementation plan	No later than October 15, 2012	√	Pending	10/30/2012
2	Monthly updates	8th day of the succeeding month beginning October 8, 2012	🟥		**Delivering to CMB**
3	CDR quality assurance software tools	Initial delivery no later than December 15, 2012			
RSS (CICS-NC) - PI: F. Wentz -Period of Performance: 9/15/2012 - 9/14/2013					**YES**
ITE	DESCRIPTION	DUE DATE			
1	Implementation plan	DUE 11/01/2012	√	Pending	11/6/2012
2	CDR superseding Version 6	To be coordinated between Contractor and CDRP			
3	Monthly updates	10th day of the succeeding month	🟥		
4	CDR quality assurance software tools	Initial delivery 12/01/2012			
University of Colorado - PI: W. Meier - $124,971 - Period of Performance: 10/01/2012 - 9/30/2013					**YES**
ITE	DESCRIPTION	DUE DATE			
1	Implementation plan	DUE 11/01/2012	√	Pending	11/1/2012
2	Update the source code to include processing of the F17 SSMIS data	March 31, 2013			
3	Quarterly updates	Delivery within 30 days of each RSS data delivery			
4	CDR quality assurance software tools	Initial delivery 12/01/2012			
5	Tally of cumulative number of CDR data downloads to public	10th day following the end of each quarter of the calendar year			

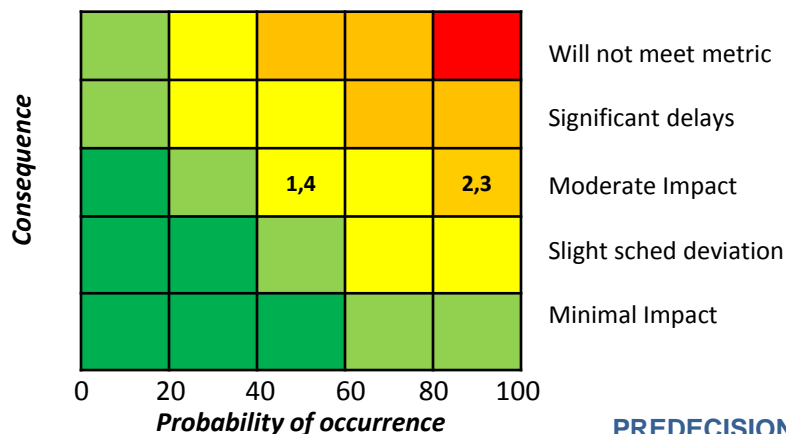|					
			🟩	RECEIVED	
			🟨	DEADLINE APPROACHING	
			🟥	OVER DUE	

CDR Program Office
NPP/JPSS Climate Raw Data Records (C-RDRs) Project

Weekly Report – November 16, 2012

① VIIRS
- **Completed code for C-RDR.**
- **Completed code for VIIRS Support Data.**

② CrIS
- Postponed.

③ ATMS
- Postponed.

④ System Infrastructure
- Integrating with the VIIRS C-RDR.

- **Integrating: Ingest data from CLASS and producing C-RDRs.**
- **Testing and verifying the C-RDRs for correctness.**
- Will deliver initial version with ADL 3.1.

C-RDR Project	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Milestones											TRR SAT						
VIIRS																	
CrIS					Reduced Resources												
ATMS						Reduced Resources											
System Infrastructure	Phase 1																

R2O PHASE: ANALYSIS | DESIGN | DEVELOPMENT | INTEGRATION | TEST | OPERATIONAL

Risk Matrix

Consequence (y-axis): Will not meet metric, Significant delays, Moderate Impact, Slight sched deviation, Minimal Impact

Probability of occurrence (x-axis): 0, 20, 40, 60, 80, 100

(1,4 placed at Moderate Impact / ~40; 2,3 placed at Moderate Impact / ~80)

Risk and Mitigation

VIIRS, CrIS, ATMS –
- Resources are being reduced. Delivery of CrIS and ATMS will be delayed.
- Operational software is under maintenance, updated versions may affect C-RDR ported version.

System Infrastructure –
- Reliability of NPP RDRs from CLASS. Need to test ingest of RDRs from CLASS and develop an automated mechanism for re-requesting data.
- Ability of CLASS to handle the frequency and volume of NPP data. CLASS has been successful during system tests.
- Archive in CLASS is currently cost prohibitive. Need to identify alternate archive. Plan to store C-RDRs on HPSS until migration to CLASS.

PREDECISIONAL DRAFT INFORMATION

11/16/2012
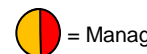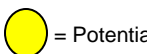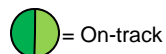
● = On-track   ● = Potential management action required   ● = Management attention required

6

Visible Infrared Imaging Radiometer Suite (VIIRS)

C-RDR Product: Raw sensor measurements with usage and provenance metadata in easily accessible netCDF4 format
GEOSS Societal Benefit: Climate, Water, Ecosystems, Agriculture, Biodiversity, Energy

Project Status

- **Attending and presenting at the ADL Workshop.**
- **Continued work on code for validation of C-RDRs against SDRs.**
- Helping define common metadata model for CLASS.
- Completed Draft VIIRS C-RDR Product Specification.
- Temporarily working on snow cover CDR for IOC.
- Generated an image from a VIIRS C-RDR.
- Successfully ran VIIRS data from CLASS through C-RDR packer.
- Completed dynamic C-RDR file-level metadata code.
- Implemented and verified netCDF compression.
- Verifying (IDPS) documentation and code changes with DEWG.
- Completed writing science and spacecraft diary data.
- Completed test of code that writes VIIRS Support Data.

Next Action / Milestone

- Integrating the VIIRS C-RDR software and the system infrastructure.

(Y)

Project Risks

- Complexity of the NPP/JPSS RDRs and operational software
- Operational software is under maintenance, updated versions may affect C-RDR ported version

Project Schedule

ID	Task Name	Status	Start	Stop	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
					FY12 Q1			FY12 Q2			FY12 Q3			FY12 Q4		
1	Analysis	Completed	10/23/2009	5/4/2010												
2	Design	Completed	5/6/2010	1/5/2011												
3	Development	95.00%	1/6/2011	1/30/2012												
3a	Develop VIIRS processing component	95.00%	1/6/2011	1/12/2012												
3b	Test VIIRS processing component	95.00%	12/28/2011	1/30/2012												
4	Integration	10.00%	1/31/2012	3/26/2012												
5	Test		3/23/2012	4/12/2012												
5a	Dry Runs		3/23/2012	4/11/2012												
5b	System Acceptance Test		4/12/2012	4/12/2012												
6	Operational		4/13/2012													

Being Reworked

POC: Biard

C-RDR System Infrastructure

C-RDR Product: Infrastructure to automate the production of the C-RDRs.
GEOSS Societal Benefit: Climate, Water, Ecosystems, Agriculture, Biodiversity, Energy

Project Status

- **Integrating Ingest, ADL, and C-RDR software. Have processed ~13,000 files. Have fixed C-RDR code errors that caused crashes.**
- Refining selection criteria when multiple RDRs are received.
- Consistently processing C-RDRs using staged ingest data from CLASS.
- Completed validation of post-launch auxiliary files in C-RDR format.
- Using ADL 4.0 code to create required metadata for auxiliary files.
- Investigating missing metadata for auxiliary data from CLASS.
- Modified supporting data software for auxiliary data changes.
- Created initial VIIRS C-RDR from CLASS mission data.
- Development environment is set up on the CICS network.
- Working on managing queues and processing jobs.
- Locating, validating, and statusing files for processing.
- Developing code for ingest detection and processing.

Next Action / Milestone

- Integrating and testing the system infrastructure.

(Y)

Project Risks

- Need to develop an automated re-request mechanism for CLASS.

Project Schedule

ID	Task Name	Status	Start	Stop	FY12 Q1 Oct	Nov	Dec	FY12 Q2 Jan	Feb	Mar	FY12 Q3 Apr	May	Jun	FY12 Q4 Jul	Aug	Sep
1	Analysis	Completed	9/29/2010	4/22/2011												
2	Design	90.00%	4/25/2011	7/8/2011												
3	Development	80.00%	5/31/2011	2/28/2012	█	█	█	█	█							
3a	Develop infrastructure	90.00%	5/31/2011	2/14/2012	█	█	█	█								
3b	Test infrastructure	70.00%	9/27/2011	2/28/2012	█											
4	Integration (Phase 2)	5.00%	1/31/2012	3/26/2012				█	█	█						
5	Test		3/23/2012	4/12/2012						█	█					
5a	Dry Runs		3/23/2012	4/11/2012						█	█					
5b	System Acceptance Test		4/12/2012	4/12/2012							█					
6	Operational		4/13/2012									█	█	█	█	█

Being Reworked

POC: Copley

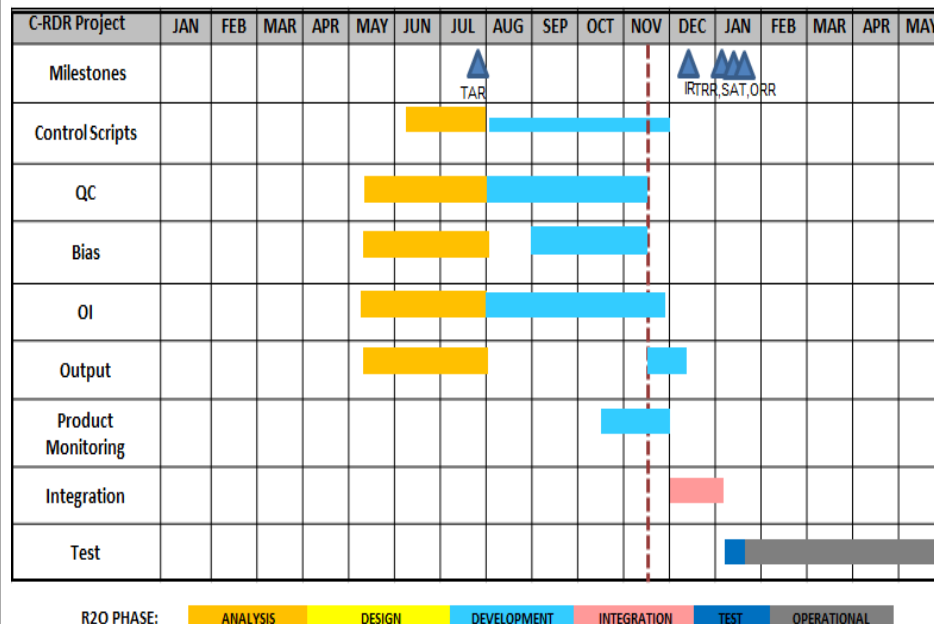# CDR Program Office
OISST Research to Operations Project

Weekly Report – November 16, 2012

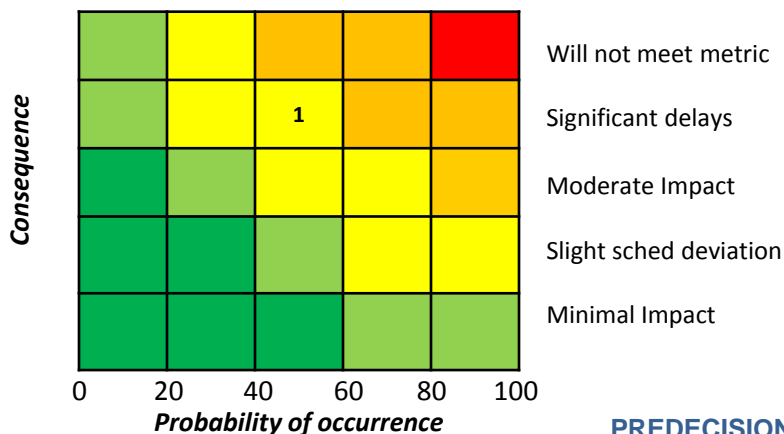**1** **OISST – Optimum Interpolated Sea Surface Temperature**

- **Conducted code review for buoyship QC.**
- **Refactoring code (Bias, QC, OI).**
- Implementing common logger calls .
- Integrated a common logging utility and identified log levels.
- Investigating the use of SPEC for product monitoring.
- Conducted code review, refactor and unit test of ship_bias.f90.
- Evaluating validity/duplicates in compile options & static analysis.
- Defined list of tasks for refactoring of each component.
- Developing tests (functional & component) to verify code.
- Completed testing of static analysis and complexity tools.
- Conducted Technology Assessment Review July 25.

Operations:
- Updated and tested scripts to handle new sea ice data format.

C-RDR Project	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Milestones							TAR						IRTRR,SAT,ORR				
Control Scripts																	
QC																	
Bias																	
OI																	
Output																	
Product Monitoring																	
Integration																	
Test																	

R2O PHASE: ANALYSIS | DESIGN | DEVELOPMENT | INTEGRATION | TEST | OPERATIONAL

Risk Matrix

Consequence (y-axis):
- Will not meet metric
- Significant delays
- Moderate Impact
- Slight sched deviation
- Minimal Impact

Probability of occurrence (x-axis): 0 20 40 60 80 100

Risk and Mitigation

Resource availability for performing the transition.

Configuration Management (CM) process not defined for operations.

No Quality Assurance team available.

Modifying existing software for internal software changes. Product output must remain unchanged for users.

Common infrastructure for operations is not fully defined.

OISST processing will be on a 64 bit architecture.

11/16/2012

= On-track   = Potential management action required   = Management attention required

Weekly Report – November 15, 2012

Weekly activities

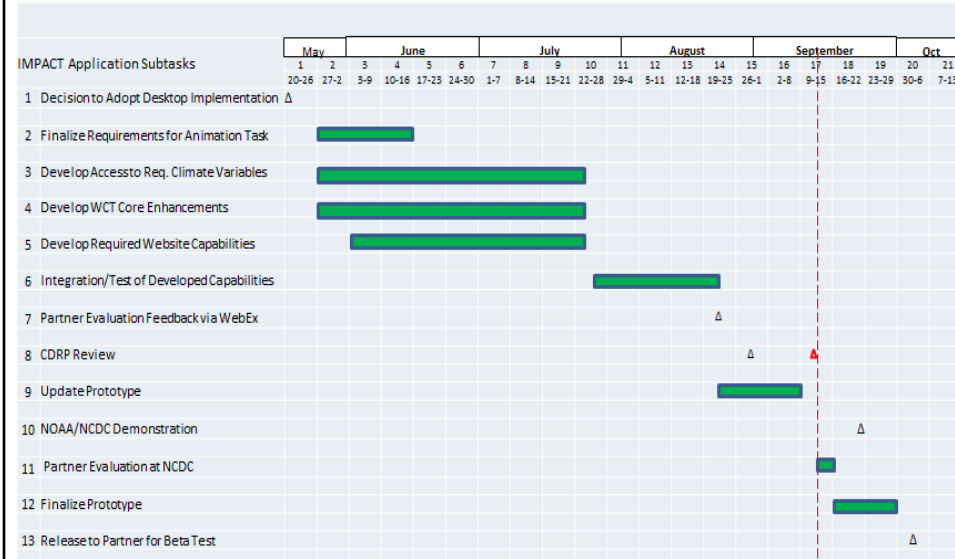- DeWayne Cecil presenting IMPACT @ Climate Knowledge Workshop – Super Computing Conference

On line tutorial/presentation
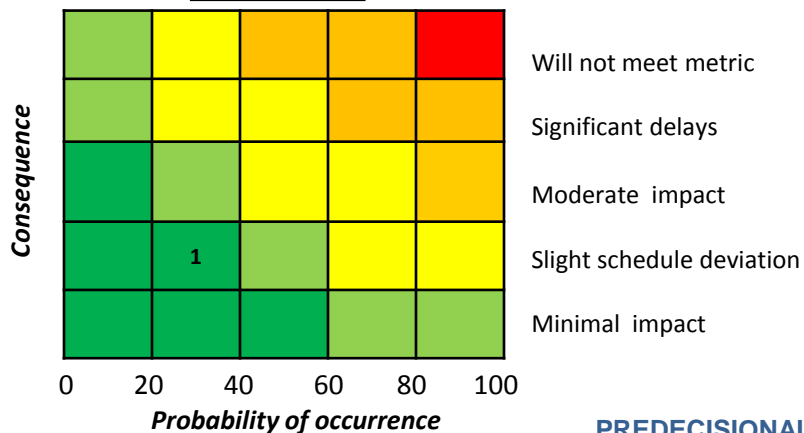
- IMPACT/WCT video tutorial portion complete

Future Enhancements under consideration

- Include a user interface for data sub-setting
- Quad-display feature
- Provide analysis feature
- Improve graphical user interface
- Include a time-series function (trending, min/max, etc.)
- Provide ability for users to include local in-situ data for analysis

Prototyping Schedule (currently being updated)

IMPACT Application Subtasks	May	June	July	August	September	Oct
1 Decision to Adopt Desktop Implementation Δ						
2 Finalize Requirements for Animation Task						
3 Develop Access to Req. Climate Variables						
4 Develop WCT Core Enhancements						
5 Develop Required Website Capabilities						
6 Integration/Test of Developed Capabilities						
7 Partner Evaluation Feedback via WebEx						
8 CDRP Review						
9 Update Prototype						
10 NOAA/NCDC Demonstration						
11 Partner Evaluation at NCDC						
12 Finalize Prototype						
13 Release to Partner for Beta Test						

Risk Matrix

Consequence (vertical axis): Will not meet metric / Significant delays / Moderate impact / Slight schedule deviation / Minimal impact

Probability of occurrence (horizontal axis): 0, 20, 40, 60, 80, 100

Risk and Mitigation

🟢 **1- Limited resources have other obligations**

- **Resources moving on to other projects – Steve, Mike**
- **Need to plan for transition of ownership & future development**

● No change ↑ Increasing Risk ↓ Decreasing Risk

PREDECISIONAL DRAFT INFORMATION

🟢 = On-track 🟡 = Potential management action required 🟠 = Management attention required